

### 3. Conclusion

**[0086]** The results of this study show that the unsaponifiable components of avocado and of soya bean (PIAS, IS, IA, H and I) stimulate the biosynthesis of collagen by dermal fibroblasts in culture. Furthermore, these effects are specific to collagen since there is no effect on the biosynthesis of the noncollagenic proteins.

**[0087]** Moreover, the preparations used increase the production of TGF- $\beta$ 1 by the dermal fibroblasts.

**[0088]** The latter result indicates that the stimulation of the biosynthesis of collagen by the different preparations would require a pathway involving TGF- $\beta$ 1.

**[0089]** The results obtained in this study show that the unsaponifiable components of avocado and soya bean (PIAS, IS, IA, H and I) are capable of increasing the biosynthesis of collagen, the principal molecule of the extracellular matrix (ECM) produced by the dermal fibroblasts.

Furthermore, these preparations increase the production of TGF- $\beta$ 1, a potent stimulant of the synthesis of the principal macromolecules of the ECM.

**[0090]** The unsaponifiable components of avocado and soya bean, through their action on the biosynthesis of collagen and of TGF- $\beta$ 1,

therefore exhibit great potential for the reconstruction of the ECM, in particular in the phenomenon of skin ageing.